IN THE CLAIMS:

Amend the claims as indicated below.

Claims 1-29 (canceled).

30. (previously presented) A method for processing a spread spectrum signal, comprising:

receiving a code modulated spread spectrum signal;

generating a code modulated signal replica of the received signal;

correlating the received signal with a first code phase delayed replica to generate an early correlation product;

correlating the received signal with a second code phase delayed replica to generate a prompt correlation product;

correlating the received signal with a third code phase delayed replica to generate a late correlation product; and

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detecting a multipath error in the received signal based on at least one relationship between an amplitude of the early correlation product, an amplitude of the prompt correlation product and an amplitude of the late correlation product.

31. (previously presented) The method of claim 30, wherein detecting the multipath error comprises detecting at least one of:

power of respective early, prompt and late correlation products;

phase of respective early, prompt and late correlation products; and

quadrature of respective early, prompt and late correlation products.

32. (currently amended) The method of claim 30 wherein detecting the multipath error comprises ~~comprise~~:

determining a sign of the multipath error; and

determining a relative magnitude of the multipath error.

33. (previously presented) The method of claim 32, wherein determining a sign of the multipath error comprises comparing a ratio of the amplitude of the prompt correlation product to an equal amplitude of the early and late correlation products, wherein the early and late correlation products are offset symmetrically from the prompt correlation product.

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34. (previously presented) The method of claim 33, wherein:

determining that a lag error exists when the amplitude of the prompt correlation product is less than twice the equal amplitude;

determining that a lead error exists when the amplitude of the prompt correlation product is more than twice the equal amplitude; and

determining that no multipath error exists if the amplitude of the prompt correlation product is equal to twice the equal amplitude.

35. (previously presented) The method of claim 32, further comprising, when the relative magnitude is determined to be below a predetermined value, determining a correction to a pseudorange calculation, wherein the correction is proportional to a sum of the amplitudes of the early correlation product and the late correlation product divided by the prompt correlation product.

36. (previously presented) The method of claim 30, further comprising using the multipath error to refine a position calculation made by a receiver processor.

37. (previously presented) The method of claim 30, further comprising using the multipath error to adjust a phase of the code modulated signal replica such that phases of respective early, prompt and late correlation products are adjusted.

38. (previously presented) The method of claim 30, further comprising using the multipath error to generate a control signal to control a phase relationship between respective early and late correlation products and further to control a relationship of the prompt correlation product with respect to the early correlation product and the late correlation product.

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39. (previously presented) The method of claim 30, further comprising using the multipath error to generate a signal model of an interfering multipath signal.

40. (previously presented) The method of claim 30, further comprising using the signal model for multipath signal cancellation.

41. (previously presented) An apparatus for receiving a signal, the apparatus comprising:

a receiver configured to receive a signal comprising a PN code;

a code generator coupled to the receiver, the code generator configured to generate a PN code replica of the received signal;

an error detector coupled to the receiver and to the code generator, wherein the error detector detects code phase error in the received signal based on at least one relationship between

a first correlation product of an early code phase delayed version of the code replica and the received signal, a second correlation product of a prompt code phase delayed version of the code replica and the received signal, and a third correlation product of a late code phase delayed version of the code replica and the received signal.

42. (previously presented) The apparatus of claim 41, further comprising at least one detector coupled to receive the first correlation product, the second correlation product and the third correlation product.

43. (previously presented) The apparatus of claim 42, wherein detecting the code phase error comprises detecting at least one of:

power of respective first, second and third correlation products;

phase of respective first, second and third correlation products; and

quadrature of respective first, second and third correlation products.

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44. (previously presented) The apparatus of claim 43, further comprising a code phase error detector coupled to the at least one detector and configured to determine a sign of the code phase error and a relative magnitude of the code phase error.

45. (previously presented) The apparatus of claim 44, wherein determining a sign of the code phase error comprises the code phase error detector comparing a ratio of the amplitude of the second correlation product to an equal amplitude of the first and third correlation products, wherein the first and third correlation products are offset symmetrically from the second correlation product.

46. (previously presented) The apparatus of claim 45, wherein the code phase error detector is further configured to:

determine that a lag error exists when the amplitude of the second correlation product is less than twice the equal amplitude;

determine that a lead error exists when the amplitude of the second correlation product is more than twice the equal amplitude; and

determine that no code phase error exists if the amplitude of the second correlation product is equal to twice the equal amplitude.

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47. (previously presented) The apparatus of claim 44, wherein the code phase error detector is further configured to determine a correction to a pseudorange calculation when the relative magnitude is determined to be below a predetermined value, wherein the correction is proportional to a sum of the amplitudes of the first correlation product and the third correlation product divided by the second correlation product.

48. (previously presented) The apparatus of claim 41, wherein the receiver is coupled to receive a code phase error signal from the code phase error detector, and wherein the receiver is configured to use the code phase error signal to refine a position calculation.

49. (previously presented) The apparatus of claim 41, further comprising an adjustable delay element coupled to the code generator and further coupled to the code phase error detector to receive a code phase error signal, wherein the at adjustable delay element is configured to use the code phase error signal to adjust a phase of the PN code replica such that phases of respective

first, second and third correlation products are adjusted.

50. (previously presented) The apparatus of claim 41, further comprising at least one delay element coupled to at least one correlator and further coupled to the code phase error detector, wherein the at least one delay element is configured to use the code phase error signal to generate a control signal to control a phase relationship between respective first and third correlation products and further to control a relationship of the second correlation product with respect to the first correlation product and the third correlation product.

51. (previously presented) The apparatus of claim 41, further comprising a signal model element coupled to the code phase error detector, wherein the signal model element is configured to use the code phase error signal to generate a signal model of an interfering code phase signal.

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52. (previously presented) The apparatus of claim 41, further comprising means for using the signal model for code phase signal cancellation.

53. (previously presented) An apparatus for processing global positioning system (GPS) satellite signals, the apparatus comprising:

receiver means for receiving a GPS signal;

code generator means for generating a PN code replica of the received GPS signal; and

multipath error detector means for detecting a multipath error in the received GPS signal based on at least one relationship between a first correlation product of the received GPS signal with a first PN code phase delayed replica, a second correlation product of the received GPS signal with a second PN code phase delayed replica, and a third correlation product of the

received GPS signal with a third PN code phase delayed replica.

54. (previously presented) The apparatus of claim 53, further comprising at least one detector means coupled to receive the first correlation product, the second correlation product and the third correlation product.

55. (previously presented) The apparatus of claim 54, wherein detecting the multipath error comprises detecting at least one of:

power of respective first, second and third correlation products;

phase of respective first, second and third correlation products; and

quadrature of respective first, second and third correlation products.

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56. (previously presented) The apparatus of claim 55, wherein the multipath error detector means is coupled to the at least one detector means and is configured to determine a sign of the multipath error and a relative magnitude of the multipath error.

57. (previously presented) The apparatus of claim 56, wherein determining a sign of the multipath error comprises the multipath error detector means comparing a ratio of the amplitude of the second correlation product to an equal amplitude of the first and third correlation products, wherein the first and third correlation products are offset symmetrically from the second correlation product.

58. (previously presented) The apparatus of claim 57, wherein the multipath error detector means is further configured to:

determine that a lag error exists when the amplitude of the second correlation product is

less than twice the equal amplitude;

determine that a lead error exists when the amplitude of the second correlation product is more than twice the equal amplitude; and

determine that no multipath error exists if the amplitude of the second correlation product is equal to twice the equal amplitude.

59. (previously presented) The apparatus of claim 56, wherein the multipath error detector means is further configured to determine a correction to a pseudorange calculation when the relative magnitude is determined to be below a predetermined value, wherein the correction is proportional to a sum of the amplitudes of the first correlation product and the third correlation product divided by the second correlation product.

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60. (previously presented) The apparatus of claim 54, wherein the receiver means is coupled to receive a multipath error signal from the multipath error detector means, and wherein the receiver means is configured to use the multipath error signal to refine a position calculation.

61. (previously presented) The apparatus of claim 54, further comprising an adjustable delay means coupled to the code generator means and further coupled to the multipath error detector means to receive a multipath error signal, wherein the at adjustable delay element is configured to use the multipath error signal to adjust a phase of the PN code replica such that phases of respective first, second and third correlation products are adjusted.

62. (previously presented) The apparatus of claim 54, further comprising at least one delay means coupled to at least one correlator and further coupled to the multipath error detector

**means, wherein the at least one delay means is configured to use the multipath error signal to generate a control signal to control a phase relationship between respective first and third correlation products and further to control a relationship of the second correlation product with respect to the first correlation product and the third correlation product.**

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63. (previously presented) The apparatus of claim 54, further comprising a signal model means coupled to the multipath error detector means, wherein the signal model means is configured to use the multipath error signal to generate a signal model of an interfering multipath signal.

64. (previously presented) The apparatus of claim 54, further comprising means for using the signal model for multipath signal cancellation.